

The Storm Water Pollution Prevention Bulletin is prepared by the Storm Water Compliance Review Task Force to aid all projects and operations in maintaining compliance with the National Pollutant Discharge Elimination System (NPDES) permit requirements.

How
Construction
Sites



Affect
Water
Quality

Storm water runoff is a carrier of pollutants to California's water bodies. Pollutants associated with roadway construction can contribute to this problem if allowed to contact storm water runoff.

Construction site pollutants include:

- Sediment from wind or water erosion. Construction activities such as clearing and grubbing and earth moving will accelerate the erosion process.
- Nutrients from fertilizers, pesticides, construction chemicals and solid waste.
- Trace metals from galvanized metal, paint and preserved wood. These metals attach to sediments in storm water runoff.
- Herbicides, insecticides, and rodenticides used on construction sites.
- Oil, grease and fuel from construction vehicle and equipment operations.
- Other toxins and floatables (adhesives, cleaners, sealants, solvents, etc.) from nearly all construction operations.



Chemical toilet floating in sediment basin

SEDIMENT POLLUTION

Should sediment from construction sites become contaminated with toxic chemicals, the toxins can accumulate in waterways and eventually be passed up the food chain. In certain circumstances they can accumulate to levels that may be toxic to humans.

Excessive sedimentation causes water quality problems and degrades the habitat of aquatic organisms and fish. Sedimentation can fill in gravel beds that are used by trout, salmon and steelhead for breeding. This will affect the food chain in the following years. Storm water sediment often leaves suspended solids that create cloudy waters that block sunlight and interfere with plant and fish growth.

OTHER POLLUTANTS

Heavy metals from batteries include cadmium, lead and zinc. While everyone is familiar with the dangers of lead poisoning, cadmium and zinc are associated with renal dysfunction.

Petroleum products and antifreeze are other toxins introduced into our waterways from construction activity.

Excessive nutrients lead to accelerated plant and algae growth that contribute to aquatic oxygen depletion and lead to fish kills.



Residue of debris around drainage path

REGULATIONS

In 1990, the U.S. Environmental Protection Agency issued regulations controlling the discharge of pollutants in storm water runoff. Storm water discharges from significant construction activities are regulated under the National Pollutant Discharge Elimination System permit.

The public has made the protection of the environment a top priority. Appropriate measures must be taken to protect the environment when constructing public improvements. To control and minimize construction site pollutants, Caltrans implements the Best Management Practices described in the Caltrans Storm Water Quality Handbooks.